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TVA might use MOX fuels from SRS

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By Rob Pavey

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JACKSON --- The U.S. Energy Department is negotiating with the Tennessee Valley Authority and at least one other potential client to use mixed oxide fuels from a \$4.86 billion facility under construction at Savannah River Site.

The 600,000-square-foot complex, scheduled to open in 2016, will dispose of 34 metric tons of surplus, weapons-grade plutonium by using small amounts to make fuel for commercial nuclear reactors.

Clay Ramsey, the National Nuclear Security Administration's MOX federal project director, said TVA has expressed strong interest in using the fuels in some of its six existing commercial reactors.

TVA also has plans to complete a seventh reactor at Watts Bar and has proposed completing two more units at its Bellefonte site in Alabama.

"We're very comfortable right now in the level of interest in our fuel," Mr. Ramsey said Tuesday, adding that a second potential client -- whose identity he could not disclose -- has opened discussions about using the fuel.

Another power producer -- Duke Energy -- had signed an agreement to use the MOX fuel, but the company disclosed in a Feb. 27 financial filing with the U.S. Securities & Exchange Commission that it had allowed its contract to lapse.

Mr. Ramsey said DOE and Duke are continuing discussions about resurrecting the contract, and the Energy Department has agreed to concessions that will make the deal more attractive.

"They had asked the Department of Energy for three years of reserves of uranium fuel as an insurance policy against any delays in being able to use the MOX fuel," he said.

Although such an agreement was not possible at the time the contract was being negotiated, DOE has since agreed to set aside a large amount of enriched uranium to ensure that clients using MOX have standard fuels available if for any reason the MOX fuels cannot be used.

Uranium oxide fuel is the normal variety for commercial power plants. MOX contains 5 percent plutonium oxide and 95 percent uranium oxide.

As another incentive to encourage commercial reactor operators to use the fuel, the facility's contractor, Shaw Areva MOX Services, will also provide certain performance guarantees on its product, he said.

"Now, as we go forward, we have some extra cards on the table," Mr. Ramsey said, noting that the MOX plant will test its first plutonium fuels in 2016 but won't begin shipping fuel to commercial clients until 2018.

"So our first products won't be out for nine more years," he said.

The concept of mixing plutonium with traditional uranium oxide reactor fuel is part of an international nonproliferation plan. The plutonium to be used at the MOX plant comes from dismantled warheads, and its conversion to commercial fuel prevents its use in nuclear weapons.

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MIXED OXIDE FUEL FABRICATION FACILITY

The 600,000-square foot facility under construction at Savannah River Site will produce fuel for commercial nuclear reactors, using small amounts of surplus, weapons-grade plutonium. A look at the project:

\$4.86 billion

Cost of facility

17%

Construction completed; the project is expected to be finished in 2016

2,506

Employees at site

Links:

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